PATENT ABSTRACTS OF JAPAN

(11)Publication number:

03-034434

(43)Date of publication of application: 14.02.1991

(51)Int.CI.

H01L 21/336 G02F 1/136 H01L 21/265 H01L 29/784

(21)Application number: 01-166673

(71)Applicant: HITACHI LTD

(22)Date of filing:

30.06.1989

(72)Inventor: AOYAMA TAKASHI

KAWACHI GENSHIROU MIYATA KENJI

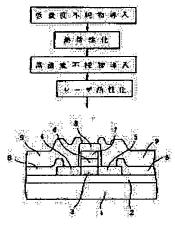
MOCHIZUKI YASUHIRO

(54) THIN FILM SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF

(57)Abstract:

PURPOSE: To activate impurity without generating the exfoliation of a poly-Si film, form a TFT of small leak current, and extremely reduce the defect of a display, by activating first introduced low concentration impurity by heat treatment at about 600° C, and activating second introduced high concentration impurity by using laser.

CONSTITUTION: A base SiO2 film 2 is deposited on a glass substrate 1 whose strain temperature is about 640° C; P-type poly-Si films 3-5 are deposited; by heat treatment at 600°. C for 5 hours, the poly-Si films 3-5 are recrystallized, and impurity in the films are activated; a gate insulating film 6 is deposited; an I-layer poly-Si film for a gate electrode 7 is deposited; after the gate electrode is patterned, P is introduced; an SiO2 film 8 is deposited; by using XeCl laser, N-type impurity (P) is activated; after photoetching process, a transparent electrode (ITO) is sputtered; after photoetching process, liquid crystal is encapsulated between a polarizing plate and another glass substrate provided with a color filter, thereby completing a display.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office